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Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

06-ESD-0012

OCT 31 2005

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Ms. Greta P. Davis
Nuclear Waste Program
State of Washington
Department of Ecology
3100 Port of Benton Boulevard.
Richland, Washington 99352

Dear Ms. Davis:

HANFORD FACILITY PROJECTIONS OF ANTICIPATED COSTS FOR CLOSURE AND/OR POSTCLOSURE FOR FISCAL YEAR 2005

Enclosed is the annual report submitted to meet the October 31, 2005, compliance due date specified in Hanford Facility Resource Conservation and Recovery Act Permit, WA7890008967 (Permit) Conditions II.H.1 and II.H.2. As in previous reports, treatment, storage, and/or disposal units that have been accepted as being "clean closed" by the State of Washington, Department of Ecology, are not included in this report.

If you have questions, please contact me, or your staff may contact Doug S. Shoop, Assistant Manager for Safety and Engineering on (509) 376-0108.

Sincerely

Keith A. Klein
Manager

ESD:ACM

Enclosures

w/encls:
S. Harris, CTUIR
R. Jim, YN
P. Sobotta, NPT
T. Z. Smith, DOE-ORP
Administrative Record, HF RCRA Permit, H6-08
Environmental Portal, LMSI
Ecology NWP Library
HF Operating Record, (S. A. Thompson, FHI)

cc w/o encls:
M. Y. Anderson-Moore, Ecology
K. A. Conaway, Ecology
L. J. Cusack, Ecology
S. L. Dahl-Crumpler, Ecology
L. L. Fritz, FHI
J. P. Henschel, BNI
A. K. Ikenberry, PNNL
R. J. Landon, BHI
J. J. Wallace, Ecology
M. A. Wilson, Ecology

ENCLOSURE

Hanford Facility Projections of Anticipated Costs for Closure and/or Postclosure
for Fiscal Year 2005

HANFORD FACILITY PROJECTIONS OF ANTICIPATED COSTS FOR CLOSURE AND/OR POSTCLOSURE FOR FISCAL YEAR 2005

The Hanford Facility Resource Conservation and Recovery Act Permit, WA7890008967 (Permit) Conditions II.H.1 and II.H.2, require an annual report updating projections of anticipated costs for closure, postclosure, and postclosure monitoring and maintenance for treatment, storage, and/or disposal (TSD) units incorporated in Part III, Part V, or Part VI of the Permit. Projections of anticipated costs are estimates and are based on knowledge that is current during issuance of this report. Projections of anticipated costs could change in subsequent reports due to completion of identified work, costs of labor and materials, negotiated closure strategy, Hanford Site budgetary priorities, or new or expanded knowledge of estimates reported in previous annual reports. Previous annual reports can be reviewed for historical information.

Estimated cost of closure and/or postclosure is provided for the 13 TSD units in Revision 8 of the Permit. The Permittee co-operating a TSD unit [management responsibilities as of September 30, 2005 with the U.S. Department of Energy (DOE)]: i.e., Bechtel National, Inc. (BNI), CH2M Hill Hanford Group, Inc. (CHG), Fluor Hanford (FH), Pacific Northwest National Laboratory (PNNL), or Washington Closure Hanford LLC (WCH). Each of the anticipated closure and/or postclosure cost projections was reviewed by BNI, CHG, FH, PNNL, and WCH for the respective TSD units managed.

Projections of anticipated closure and/or postclosure costs updated with an escalation factor are based on previously submitted cost estimates and the latest revision of the closure and/or postclosure plans, adjusted for 2005 inflation. The escalation factor is an overall factor applied to the total of the previous estimate. Projections of anticipated costs are updated if a change to the closure and/or postclosure plan affects the cost of closing the unit. These projections are updated annually to reflect the current status of the TSD unit in terms of closure and/or postclosure plan documentation or actual closure and/or postclosure activities. The escalation factor provided for FY 2005 is 2.6 percent. The cost estimates have been rounded to three significant figures.

The following are the estimating categories that were considered for this report:

- **Escalation Factor** –Anticipated closure cost projection was submitted for the TSD unit in a previous report; and no significant change in the approach to closure was made. The cost projection includes an escalation factor applied to the dollar figure reported in the previous annual report, or a cost estimate using the work break-down structure process.
- **New Estimate Provided** – Anticipated closure cost projection was submitted for the TSD unit in a previous report and a significant change in the approach to closure was made following the report submittal, warranting a full cost projection revision; or no anticipated closure cost projection was submitted previously for the TSD unit, and a new cost projection is provided.
- **Administrative or Other Costs Remaining** – Clean closure certification documentation was submitted for the TSD unit; however administrative or indefinite (referred to as 'other') costs remain, or a closure cost projection is not needed at this time, however costs will be supplied at a future date.
- **Clean-Closed; No Estimate Needed** – Clean closure certification documentation was submitted for the TSD unit and no additional costs remain. An updated closure cost projection is no longer needed.

There are 10 escalation projections included in this report for the TSD units that have been incorporated into the Permit, for which the original strategy of pursuing closure has not changed. Reported previously, one TSD unit has the entire estimate deferred until a future date and one TSD unit estimate is not due until the first October following commencement of mixed waste processing. There is one new estimate.

If a TSD unit was presented in a previous annual report with no further costs pending, the TSD unit is no longer included in this annual report. TSD units that have been accepted as being 'clean closed' by Ecology are not included in this report.

HANFORD FACILITY PROJECTIONS OF ANTICIPATED COSTS FOR CLOSURE AND/OR POSTCLOSURE FOR FISCAL YEAR 2005

TSD Unit	Contractor	Escalation Factor	New Estimate	Administrative/ Other Costs Remaining	Clean Closed	FY 2005 Estimate (millions)
Part III						
305-B Storage Facility	PNNL	X				3.99
PUREX Storage Tunnels	FH			X		0
LERF and 200 Area ETF	FH	X				5.62
242-A Evaporator	CHG	X				2.17
325 Hazardous Waste Treatment Units	PNNL	X				8.33
Waste Treatment and Immobilization Plant	BNI			X		0
Part V						
1325-N Liquid Waste Disposal Facility	WCH	X				3.41
1301-N Liquid Waste Disposal Facility	WCH					
1324-N Surface Impoundment	WCH	X				1.89
1324-NA Percolation Pond	WCH					
300 Area Waste Acid Treatment System	WCH		X			6.52
Part VI						
300 Area Process Trenches	FH	X				2.95
183-H Solar Evaporation Basins	FH	X				1.90
TOTAL (Millions)						**$36.8**

PART III

305-B Storage Facility

The closure strategy/approach has not changed. The total cost for closure is estimated to be approximately $3.99 million (2005 dollars).

Plutonium-Uranium Extraction Plant (PUREX) Storage Tunnels

The closure strategy for this TSD unit has not been finalized and is expected to occur during decommissioning and decontamination (D&D) of the Plutonium-Uranium Extraction (PUREX) Plant. As agreed with Ecology, the PUREX Storage Tunnels projection of anticipated costs is deferred until a future date when a definitive closure strategy is developed. When these costs become available, costs will be included in a future annual report.

Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility

The closure strategy/approach for Liquid Effluent Retention Facility has not changed. The total estimated costs for closure do not include the cost to operate the 200 Area Effluent Treatment Facility to treat waste generated during Liquid Effluent Retention Facility closure activities. The total cost for closure is estimated to be approximately $4.17 million (2005 dollars).

The closure strategy/approach for 200 Area Effluent Treatment Facility has not changed. The total cost for closure is estimated to be approximately $1.45 million (2005 dollars).

242-A Evaporator

The closure strategy/approach has not changed; however the cost estimate was updated using the work break-down structure process. The total cost for closure is estimated to be approximately $2.17 million (2005 dollars).

325 Hazardous Waste Treatment Units

The closure strategy/approach has not changed. The total cost for closure is estimated to be approximately $8.33 million (2005 dollars).

Waste Treatment and Immobilization Plant

Per Permit Attachment 51, Chapter 11.0, §11.9, and Permit Condition III.10.A, closure cost projections are not due to be submitted until the first October following commencement of mixed waste processing.

PART V

1325-N and 1301-N Liquid Waste Disposal Facilities

The 1301-N and 1325-N Liquid Waste Disposal Facilities closure/postclosure plan was approved and incorporated into the Permit during FY 1999. Closure activities are ongoing. The plan calls for completion of closure activities at 1301-N and 1325-N, followed by a 30-year postclosure period.

Postclosure activities include periodic assessments and groundwater monitoring. Institutional controls will be required during the postclosure period. The total cost of closure and postclosure activities is estimated at approximately $3.41 million (2005 dollars).

1324-N Surface Impoundment and 1324-NA Percolation Pond

The 1324-N Surface Impoundment and 1324-NA Percolation Pond closure/postclosure plan was approved and incorporated into the Permit during FY 1999. The 1324-N and 1324-NA sites were backfilled in FY 2003. The Certification of Closure was submitted to Ecology in February 2003. The 1324-N/NA estimate only includes postclosure costs.

Postclosure activities include periodic assessments and groundwater monitoring for 30 years. The postclosure estimate includes costs for groundwater monitoring, groundwater well inspection and maintenance, and Permit compliance activities. The total cost of postclosure activities is estimated at approximately $1.89 million (2005 dollars).

300 Area Waste Acid Treatment System

The 300 Area Waste Acid Treatment System (WATS) closure plan was completed in December 2001. The clean closed 300 Area WATS locations were released from the requirements of RCRA and WAC 173-303. The soil at Areas 1 and 2 remain unclosed and regulated by RCRA, Chapter 173-303 WAC until soil disposition in conjunction with the future 300-FF-2 Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) Operable Unit remedial action. Area 1 is located beneath the concrete WATS and U-Bearing Piping trench. Area 2 is located beneath the scabbled concrete floor of the old 313 Building. Concrete surfaces over unclosed soil remain until the time of soil disposition.

The cost estimate for the 300 Area WATS was determined using Interim ROD 300-FF-2, dated April 2001. The two 300 Area WATS sites (300-224 and UPR-300-39), listed 2001 value costs at $.23 million and $5.68 million respectively and escalation factors were applied for the years 2002 through 2005. Escalation factors applied for 2002 (2.1%), 2003 (2.7%), 2004 (2.6%), and 2005 (2.6%).

The total cost of postclosure activities is estimated at approximately $6.52 (2005 dollars).

PART VI

300 Area Process Trenches

The 300 Area Process Trenches modified closure/postclosure plan was approved and incorporated into the Permit in FY 1997. In May 1998, closure activities at the 300 Area Process Trenches were completed, and postclosure began. Postclosure will continue for a 30-year period, culminating in postclosure certification in FY 2028. The cost estimate was determined using the total cost through FY 2028 at $3,423,639 and applying an escalation factor for 2000 (2.1%), 2001 (2.3%), 2002 (2.1%), 2003 (2.7%), 2004 (2.6%), and 2005 (2.6%); and credit for work completed.

The cost of remaining postclosure activities is estimated at $2.95 million (2005 dollars).

183-H Solar Evaporation Basins

The 183-H Solar Evaporation Basins postclosure and groundwater monitoring plans were approved and incorporated into the Permit in FY 1997. The plans call for a 30-year controlled period during which postclosure activities will be performed. Postclosure activities are scheduled to be completed in FY 2027 and will culminate in postclosure certification. A modified groundwater monitoring program has been accepted because groundwater beneath the 183-H Solar Evaporation Basins is within the hydraulic influence of a pump-and-treat operation. For the remainder of the estimating period, it is assumed that the monitoring network originally proposed for the unit was re-established (beginning in FY 2003). The cost estimate was determined using the total cost through FY 2028 at $1,989,759 and applying an escalation factor for 2000 (2.1%), 2001 (2.3%), 2002 (2.1%), 2003 (2.7%), 2004 (2.6%), and 2005 (2.6%); and credit for work completed.

The total cost for the remaining postclosure activities is estimated at approximately $1.9 million (2005 dollars).